Exhibit 5
Part 11
To Third Declaration of
Joseph N. Hosteny

'988 Patent	ANSI/ABA X9.46-1995 document
	checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33.
polling the remote locations for transaction data with servers in the intermediate locations;	"The node 12 contains a frame relay assembler/disassembler 40 which receives frames of digital information representing check images sent by service subscribers to the network 38. The assembler/disassembler 40 also transmits frames of digital information representing check images to the network 38 after those images have been processed by the node 12. A node controller and router 42 controls the routing of check images to their intended destinations, both in the controller and to their ultimate destinations outside the network 38." Campbell, et al., Col. 3, lns 30-39. "The controller 42 may read some data accompanying check images, for example, it may identify that TCP/IP protocol information accompanying those images. That information may instruct the node 12 about the identity of the sending institution and the intended receiving institution." Campbell, et al., Col. 5, lns 23-28. Several severs are suitable for imaging applications. Minoli, p. 33; 250.
storing the transaction data in the intermediate locations in a useful form, said storing maintains the transaction data in a primary memory of a memory hierarchy and performs backup storage of the transaction data into a secondary memory of the memory hierarchy; and	"[T]he processing node 12 receives check images and performs certain processing procedures on those images, including at least temporary storage of the received check images." Campbell, et al., Col. 3, lns. 43-58.
dynamically assigning the servers to receive portions of the transaction data for balancing the transaction data among the servers.	"The node 12 contains a frame relay assembler/ disassembler 40 which receives frames of digital information representing check images sent by service subscribers to the network 38. The assembler/disassembler 40 also transmits frames of digital information representing check images to the network 38 after those images have been processed by the node 12. A node controller and router 42 controls the routing of check images to their intended destinations, both in the controller and to their ultimate destinations outside the network 38." Campbell, et al., Col. 3, lns 30-39. "Bridges connect two or more LANs at the MAC layer. A bridge receiving packets (frames of information will pass the packets to the interconnected LAN based on some forwarding algorithm selected by the manufacturer (explicit route, dynamic address filtering, static address filtering, etc.) Minoli, p. 248-49.
38. The method as in claim 36 wherein said transmitting the transaction data step comprises the steps of:	ANSI in view of Campbell, et al. (5,373,550)
transmitting data within the remote locations;	Items are transmitted from the "Image and Data Processing Application" to the "Originating FII translator" within the originating financial institution. ANSI, p. 202 (FIG. F.1).

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transmitting data from each remote location to a corresponding intermediate location;	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33.
transmitting data within the intermediate locations;	"A local area network 56 connects the subsystems of the node 12 described above." Campbell, et al., Col. 4, lns. 56-58.
transmitting data from each intermediate location to corresponding central locations; and	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33.
transmitting data within the central locations.	Items are transmitted from the "Receiving FII translator" to the "Image and Data Processing Application" within the receiving financial institution. ANSI, p. 203 (FIG. F.2).
39. A method as in claim 38 wherein said transmitting data from each remote location to corresponding intermediate locations step comprises the steps of:	ANSI in view of Campbell, et al. (5,373,550)
connecting each remote location to a corresponding intermediate location; and	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33. "[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15-16; 199. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199. "Communication protocol" is defined as "[a] set of conventions or rules involving predetermined sequences of control signals or characters to establish, or break, connection, or exchange data between discrete computer systems, within networks, (between mainframe and remote terminals), or between a computer and a peripheral." ANSI, p. 142.
connecting the intermediate locations to corresponding remote locations.	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33. "[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15-16; 199. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199. "Communication protocol" is defined as "[a] set of

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	conventions or rules involving predetermined sequences of control signals or characters to establish, or break, connection, or exchange data between discrete computer systems, within networks, (between mainframe and remote terminals), or between a computer and a peripheral." ANSI, p. 216.
40. A method as in claim 38 wherein said transmitting data from each intermediate location to corresponding central locations comprises the steps of:	ANSI in view of Campbell, et al. (5,373,550)
connecting each intermediate location to an external communication network; and	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33. "[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15-16; 199. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199. "Communication protocol" is defined as "[a] set of conventions or rules involving predetermined sequences of control signals or characters to establish, or break, connection, or exchange data between discrete computer systems, within networks, (between mainframe and remote terminals), or between a computer and a peripheral." ANSI, p. 217.
connecting the corresponding central locations to the communication network.	The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, lns 25-33. "[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 15-16; 199. Examples of communication methods include "teleprocessing methods: links, network end point addresses, speed, data transfer protocols, etc." ANSI, p. 172; 199. "Communication protocol" is defined as "[a] set of conventions or rules involving predetermined sequences of control signals or characters to establish, or break, connection, or exchange data between discrete computer systems, within networks, (between mainframe and remote terminals), or between a computer and a peripheral." ANSI, p. 216.
41. A method as in claim 40 wherein said transmitting data from each intermediate location to corresponding central locations step further comprises the steps of:	ANSI in view of Campbell, et al. (5,373,550)
packaging the transaction data into frames;	"The node 12 contains a frame relay assembler/disassembler 40 which receives frames of digital information

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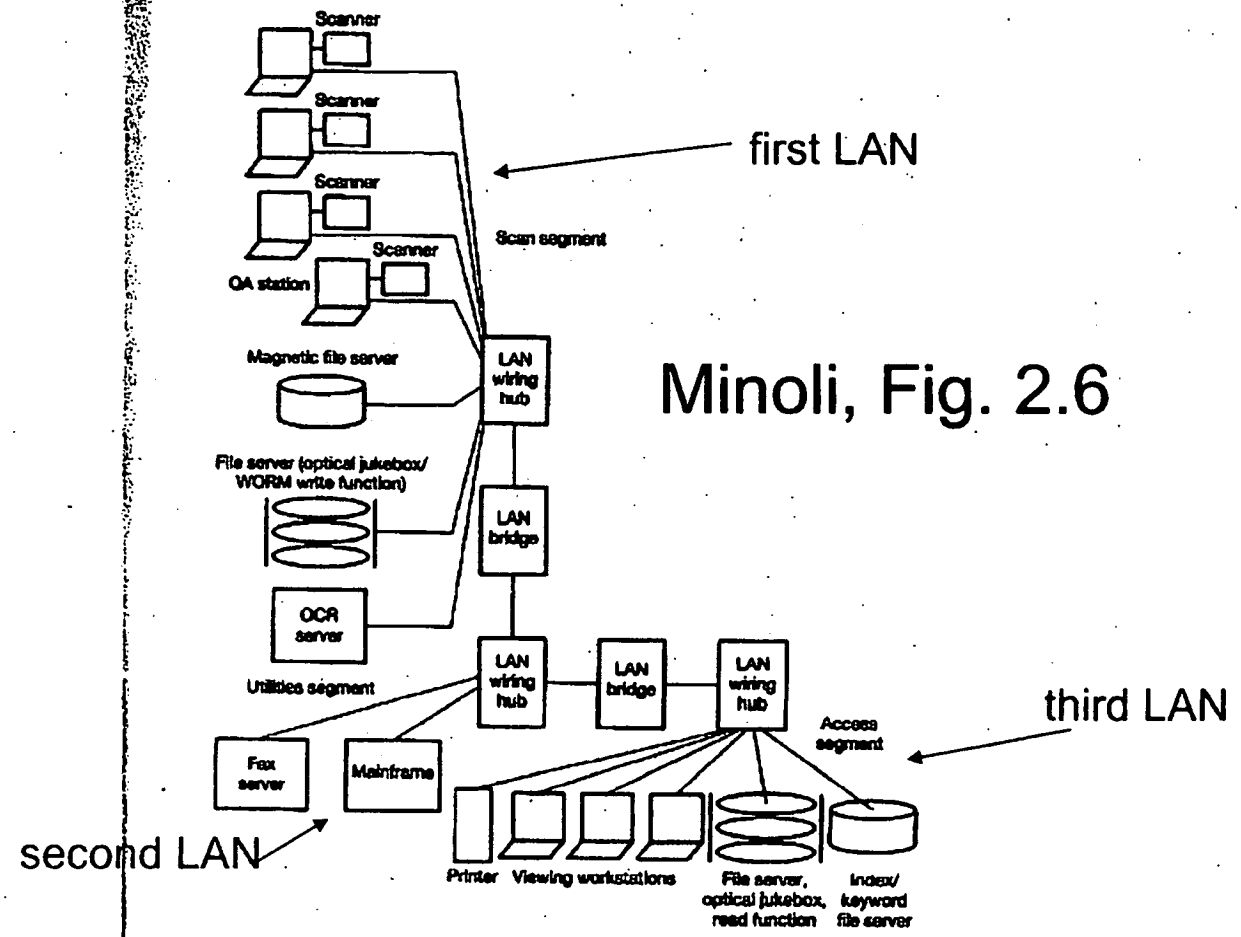
and	representing check images sent by service subscribers to the network 38. The assembler/disassembler 40 also transmits frames of digital information representing check images to the network 38 after those images have been processed by the node 12. A node controller and router 42 controls the routing of check images to their intended destinations, both in the controller and to their ultimate destinations outside the network 38." Campbell, et al., Col. 3, lns 30-39.
transmitting the frames through the external communication network.	"The node 12 contains a frame relay assembler/disassembler 40 which receives frames of digital information representing check images sent by service subscribers to the network 38. The assembler/disassembler 40 also transmits frames of digital information representing check images to the network 38 after those images have been processed by the node 12. A node controller and router 42 controls the routing of check images to their intended destinations, both in the controller and to their ultimate destinations outside the network 38." Campbell, et al., Col. 3, lns 30-39.



first LAN

Minoli, Fig. 2.6

third LAN

second LAN

Figure 2.6 A typical LAN-based imaging system at the hardware level. (*Note:* WORMs are created on equipment located on the scan segment. After they are "written," they are physically moved to the access segment servers.)

porate Environments"

'988 Patent	Minoli, "Imaging in Corporate Environments"
42. A communication network for the transmission of data within and between one or more remote data processing subsystems, at least one intermediate data collecting subsystem and at least one central subsystem forming a tiered architecture	Minoli is entitled "Imaging in Corporate Environments: Technology and Communication." As Minoli states in the preface to his book, "The word Communication in the subtitled emphasizes aspects of remote deliver of stored image information, whether across a local area network (LAN) in a building or campus, or a wide area network (WAN) covering a region, a state, or the nation." Minoli, p. xi. "WAN communication services [] can be employed in support of distributed imaging in general and LAN interconnection in particular." Minoli, p. 39. FIGs. 2.5, 2.6, 2.8, 2.10 and 9.8 show multi-tiered imaging architecture.
wherein each of said at least one central data processing subsystem communicate with a corresponding some of said at least one data collecting subsystem and each of said at least one data collecting subsystem communicate with a corresponding some of said one or more data processing subsystems,	Minoli teaches that a typical remote image capture application in the banking industry "involves (1) scanning of documents at branch offices for transmission to a host computer at the main office of the central site." Minoli, p. 20. The Scan segment provides an imaging subsystem (scanner) that captures images of documents. These images may be routed in electronic form through the Utilities segment to make use of the fax server or mainframe, to the Access segment for viewing and storage. As is clear from the diagram attached in Exhibit F, in order for images to be transmitted to the Access Segment, they must be routed through the Utilities segment.. Minoli, p. 31. The top-left-hand corner of FIG. 2.6 demonstrates several scanners connected by a LAN as a "Scan segment" in a 3-tier architecture. Minoli, p. 31. Each of the 3 LANs has a LAN wiring hub, which is a common connection point for devices in a network. The LANs are illustrated as connected by a LAN bridge, which is a device that connects two or more LANs. However, Minoli contemplates that these 3 LANs could also be connected by a WAN, "WAN communication services [] can be employed in support of distributed imaging in general and LAN interconnection in particular." Minoli, p. 39. In FIG. 9.8, a "remote site" having a "LAN wiring hub" which is connected to a central site through a WAN. Minoli, p. 270.
said data processing subsystem including an imaging subsystem for capturing images of documents and receipts, comprising:	"Scanning station" "converts documents into compressed data files and transmits them (typically over a LAN) to a shared-image database." Minoli, p. 9.
42a. at least one first local area network for transmitting data within a corresponding one of said one or more remote subsystems;	Minoli teaches that a typical remote image capture application in the banking industry "involves (1) scanning of documents at branch offices for transmission to a host computer at the main office of the central site." Minoli, p. 20. The top-left-hand corner of FIG. 2.6 is the "Scan segment" and demonstrates several scanners connected by a LAN having a "LAN wiring hub." Minoli, p. 31.
42b. at least one second local area network for transmitting data within a corresponding one of said at least one intermediate subsystem;	The bottom-left-hand corner of FIG. 2.6 demonstrates a "fax server" and a mainframe connected via a "LAN wiring hub" in a portion of the 3-tiered-architecture shown as the "Utilities segment." Minoli, p. 31.
42c. at least one third local area network for transmitting data within a corresponding one of said at least one central subsystem; and	FIG. 2.6 shows an "Access segment" in the bottom corner of the 3-tiered architecture including a file server, a printer, and viewing workstations connected through a "LAN wiring hub." This LAN is connected to the Utilities segment LAN via a "LAN bridge." Minoli, p. 31.

'988 Patent	Minoli, "Imaging in Corporate Environments"
42d. at least one wide area network for transmitting data between said one or more remote subsystems, said at least one intermediate subsystem and said at least one central subsystem.	"WAN communication services [] can be employed in support of distributed imaging in general and LAN interconnection in particular." Minoli, p. 39. "Figure 9.8 depicts WAN connectivity using public frame relay service for LANs supporting imaging applications." Minoli, p. 270. The caption of that figure teaches that this network architecture can be used "to support enterprisewide dissemination of image," such as "scanning of documents at branch offices for transmission to a host computer at the main office of the central site." A WAN is also illustrated in FIGs. 2.8 and 2.10 allowing remote users access to images. Routers and bridges are illustrated providing communications over a WAN.
43. A communication network as in claim 42 further comprising:	See claim 42
at least one first modem for connecting said at least one first local area network of said one or more remote subsystems to a corresponding one of said at least one second local area network through said at least one wide area network;	Minoli teaches "dial-up link between LAN routers." Minoli, p. 263. "This approach involves the use of modems connected to the LAN server (bridge or router), to utilize the analog public telephone network. Circuit switching implies that the communications channel is not dedicated 24 h per day, but must be brought on line when needed (via a process called call setup) and then taken down when no longer needed." Minoli, p. 263.
at least one bank of modems for connecting said at least one second local area network of said at least one intermediate subsystem to a corresponding some of said at least one first local area network of said one or more remote subsystems through said at least one wide area network;	Minoli teaches "dial-up link between LAN routers." Minoli, p. 263. "This approach involves the use of modems connected to the LAN server (bridge or router), to utilize the analog public telephone network. Circuit switching implies that the communications channel is not dedicated 24 h per day, but must be brought on line when needed (via a process called call setup) and then taken down when no longer needed." Minoli, p. 263.
at least one first wide area network router for connecting a corresponding one of said at least one second local area network of said at least one intermediate subsystem to said at least one wide area network; and	Figure 9.8 shows a "Router" for connecting the "LAN wiring hub" of the "second local area network" to the "wide area network," i.e., "frame relay network." Minoli, p. 270. FIG. 2.8 also shows a transmission to a WAN through a router. Minoli, p. 37.
at least one second wide area network router for connecting a corresponding one of said at least one third local area network of said at least one central subsystem to said at least one wide area network.	Figure 9.8 shows a "Router" for connecting the "LAN wiring hub" of the "third local area network" to the "wide area network," i.e., "frame relay network." Minoli, p. 270. FIG. 2.8 also shows a transmission to a WAN through a router. Minoli, p. 37.

'988 Patent	Minoli, "Imaging in Corporate Environments"
44. A system as in claim 43 wherein said at least one first wide area network and said at least one second wide area network comprises a carrier cloud which utilizes a frame relay method for transmitting the transaction data.	"Frame relay service provides interconnection among n sites by requiring only that each site be connected to the 'network cloud' via an access line. ... The cloud consists of switching nodes interconnected by trunks used to carry traffic aggregated from many users (see Fig. 9.7). In a public frame relay network the switches and the trunks are put in place by a carrier for use by many corporations. ... In a private frame relay network, the switches and trunks are put in place (typically) by the corporate communications department of the company in question." Minoli, p. 268.
45. A system as in claim 44 wherein said at least one second local area network and said at least one third local area network further comprises a corresponding one of at least one network switch for routing transaction data within said at least one second local area network and said at least one third local area network; and further wherein said data comprises (a) electronic transactions from credit cards, smart cards and debit cards, signature data or biometric data, or (b) paper transactions from documents and receipts.	"Frame relay service provides interconnection among n sites by requiring only that each site be connected to the 'network cloud' via an access line. ... The cloud consists of switching nodes interconnected by trunks used to carry traffic aggregated from many users (see Fig. 9.7). In a public frame relay network the switches and the trunks are put in place by a carrier for use by many corporations. ... In a private frame relay network, the switches and trunks are put in place (typically) by the corporate communications department of the company in question." Minoli, p. 268. Minoli teaches that a typical remote image capture application in the banking industry "involves (1) scanning of documents at branch offices for transmission to a host computer at the main office of the central site." Minoli, p. 20. "Scanning station" "converts documents into compressed data files and transmits them (typically over a LAN) to a shared-image database." Minoli, p. 9.

Element by element comparison of claims 1-41 of the '988 Patent to the ANSI/ABA X9.46-1995 document, alone and in combination with the newly cited and previously cited prior art.

'988 Patent	ANSI/ABA X9.46-1995 document
1. A system for central management, storage and report generation of remotely captured paper transactions from documents and receipts comprising:	The ANSI X9.46 standard is an electronic data interchange protocol for the exchange of electronic digitized images of financial documents among different financial institutions involved in a payment transaction. ANSI, p. 1. The exchange occurs across diverse computing platforms. Packaged interchange content may be delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the data electronically. ANSI, p. 15-16. "This standard is intended to improve the payments system by supporting the interchange of digitized images of financial documents, specifically check and similar paper-based instruments; facilitate the truncation of the paper at the earliest possible point in the clearing process; and support transmissions from a single transaction to many transaction serving banking payment processing applications." ANSI, p. 1.
1a. one or more remote data access subsystems for	The ANSI X9.46 standard is an electronic data interchange protocol for the exchange of electronic digitized images of financial documents among different financial institutions involved in a payment transaction. ANSI, p. 1.
capturing and	"The institution participating in check image interchange shall capture both the full front and the full back of the item. ANSI, p. 9. The definition of Image Capture is found in the glossary of the standard on p. 220, "The operation of converting a human-readable image on paper to a digital representation stored in memory, or some other electronic, or optical, or electromagnetic, surfaced storage media. This is normally accomplished using some type of scanning device or camera."
sending	Transaction sets are interchanged. Transaction set contents are different for each functional group that can be interchanged. ANSI, p. 14.
paper transaction data and Subsystem identification information comprising	The function groups include "item views". ANSI, p. 12. "Item Views" include "bundles of views of imaged items, item information for each view and item view data." ANSI, p. 12. "For each item, e.g., check, this standard defines mechanisms for sending and receiving both information about the item (item information) and digitized representations of the item." ANSI, p. 9. Subsystem ID: In addition to images, a data element known as "creation computer" which "conveys the system name of the originator's host computer that was used to create and digitize the imaging data" may be transmitted. ANSI, p. 105. The "creation computer" is a item view data element. ANSI, p. 93-94.
at least one imaging subsystem for capturing the documents and receipts and	The institution participating in check image interchange shall capture both the full front and the full back of the item. This is accomplished using some type of scanning device or camera. ANSI, p. 9; 217.

'988 Patent	ANSI/ABA X9.46-1995 document
at least one data access controller for	"The data to be interchanged from the originating imaging application are packaged by the FII-translator." ANSI, p. 12.
managing the capturing and sending of the transaction data;	"The translator (FII-translator) function of the originating application produces an interchange object (i.e., a complex data structure) by translating the output of the local imaging handling, data processing, or data storage application into a standardized interchangeable 'edi' structure." ANSI, p. 14; 150-151.
1b. at least one central data processing subsystem for	"The data to be interchanged from the originating imaging application are packaged by the FII-translator, and sent to the receiving imaging application." ANSI, p. 12.
processing, sending, verifying and storing	"[U]pon receipt of the interchanged data, the FII-translator will parse the incoming data for the receiving imaging application. Then, the receiving imaging application may generate acknowledgements or replies to query requests, and become the originating imaging application for a new image interchange." ANSI, p. 12. On p. 14, lines 465-466, of the standard states that the "edi" translator function of the receiving application translates the "edi" interchange into the locally understood data structures for subsequent storage or processing of the data by the receiver's application."
the paper transaction data and the subsystem identification information comprising	Transaction sets are interchanged. Transaction set contents are different for each functional group that can be interchanged. ANSI, p. 14. The function groups include "item views". ANSI, p. 14. "Item Views" include "bundles of views of imaged items, item information for each view and item view data." ANSI, p. 14. "For each item, e.g., check, this standard defines mechanisms for sending and receiving both information about the item (item information) and digitized representations of the item." ANSI, p. 9. Subsystem ID: In addition to images, a data element known as "creation computer" which "conveys the system name of the originator's host computer that was used to create and digitize the imaging data" may be transmitted. ANSI, p. 105. The "creation computer" is a item view data element. ANSI, p. 93-94.
a management subsystem for managing the processing, sending and storing of the of the transaction data; and	"[U]pon receipt of the interchanged data, the FII-translator will parse the incoming data for the receiving imaging application. Then, the receiving imaging application may generate acknowledgements or replies to query requests, and become the originating imaging application for a new image interchange." ANSI, p. 12.
1c. at least one communication network for the transmission of the transaction data	"[P]ackaged interchange content is delivered from the originating imaging application's financial image interchange translator to the receiving imaging application's financial image interchange translator is through a computer network by transmitting the packaged interchange data electronically." ANSI, p. 16; 199.
within and	Items are transmitted from the "Image and Data Processing Application" to the "Originating FII translator"

Element by element comparison of claims 42-45 of the '988 Patent to Campbell, et al. (U.S. Patent No. 5,373,550).

'988 Patent	'550 to Campbell, et al.
42. A communication network for the transmission of data within and between one or more remote data processing subsystems, at least one intermediate data collecting subsystem and at least one central subsystem forming a tiered architecture wherein each of said at least one central data processing subsystem communicate with a corresponding some of said at least one data collecting subsystem and each of said at least one data collecting subsystem communicate with a corresponding some of said one or more data processing subsystems,	"The system of FIG. 1 comprises a public switched telephone network 10. The network 10 contains at least one check image processing node 12 which provides check clearance services. The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, ln 25-33.
said data processing subsystem including an imaging subsystem for capturing images of documents and receipts, comprising:	"The sending institution 14 possesses check imaging equipment 18 which produces electrical or optical signals representing the image of a check. The image may comprise a sequence of signals each representing some characteristic of a picture element, for example, each signal may represent the intensity or color of light reflected from a small region on the front or back surface of a check. The check imaging equipment may be any device which can create suitable graphic image signals. For example, the imaging equipment may comprise systems which scan the front face, the back face or both the front and back faces of a check, as required, to create a series of intensity or color signals for each picture element making up the scanned surfaces of the check. The imaging equipment may be large multiworkstation systems available from companies such as IBM, UNISYS, or NCR. Campbell, et al., Col. 2, ln. 64 – Col. 3, ln. 12.
42a. at least one first local area network for transmitting data within a corresponding one of said one or more remote subsystems;	"The imaging equipment may be large multiworkstation systems available from companies such as IBM, UNISYS, or NCR." Campbell, et al., Col. 3, ln. 10-12. "The images produced by the equipment 18 are directed to a network interface 20 which converts the signals from the equipment 18 into signals suitable for transmission on the telephone network 10." Campbell, et al., Col. 3, ln 17-20. "The output of the network interface 20 is connected to one or more network access lines 22 in FIG. 1. The network access lines 22 may comprise any form of transmission line suitable for carrying the expected volume of check image traffic between the sending institution 14 and the telephone network 10. For example, the network access lines 22 may comprise one or more digital transmission lines operating at speeds of about 2400 bits per second to about 1.544 megabits per second or more. Connection to the network 10 may be by an ordinary dial up line or by a dedicated private line." Campbell, et al., Col. 3, ln 20-31.

'988 Patent	'550 to Campbell, et al.
42b. at least one second local area network for transmitting data within a corresponding one of said at least one intermediate subsystem;	"A local area network 56 connects the subsystems of the node 12 described above." Campbell, et al., Col. 4, lns. 56-58. "The node controller and router 42 provides interfaces to systems external to the node 12. It is connected to all the other subsystems in the node 12 by way of the local area network 56. The controller 42 provides access to the database 46 and directs check images to appropriate subsystems in the node 12 connected to the local area network 56. The controller 42 also routes the check images from the node 12 to their ultimate destinations by way of the assembler/disassembler 40 and the frame relay network 38. The controller 42 may read some data accompanying check images, for example, it may identify that TCP/IP protocol information accompanying those images." Campbell, et al., Col. 5, lns. 14-26.
42c. at least one third local area network for transmitting data within a corresponding one of said at least one central subsystem; and	"Check images are received in a network interface 30 in the receiving institution 16. The interface 30 transforms the signals from the network 10 into a form suitable for use by check image processing equipment 32 located in the receiving institution 16. The check image processing equipment 32 may be similar to the imaging equipment 18 located in the sending institution 14. The equipment 32 may also be facsimile equipment, character recognition equipment, e-mail systems, or any other image processing equipment by which the images received may be displayed or used by the receiving institution." Campbell, et al., Col. 3, ln 41-52.
42d. at least one wide area network for transmitting data between said one or more remote subsystems, said at least one intermediate subsystem and said at least one central subsystem.	The image of a check is created in a sending institution and sent to a receiving institution by means of the public switched telephone network. Campbell, et al., Col. 2, lns. 20-22. "The public switched telephone network 10 may be a telephone network provided by a local exchange carrier such as one of the Regional Bell Operating Companies or it may be a telephone network provided by a long distance carrier such as AT&T. Another example of a public switched telephone network 10 is the combined network provided by a local exchange carrier and a long distance carrier. The network may be either electrically or optically based or may involve combinations of those two technologies. The network may be digital or analog. Two examples of suitable digital networks are a packet network and a frame relay network, such as the existing packet and frame relay networks now provided by carriers such as AT&T." Campbell, et al., Col. 2, lns. 50-63.
43. A communication network as in claim 42 further comprising:	Campbell et al. in view of Minoli "Connection to the network 10 may be by an ordinary dial up line or by a dedicated private line." Campbell, et al., Col. 3, lns 29-31.
at least one first modem for connecting said at least one first local area network of said one or more remote subsystems to a corresponding	Dial-up link between LAN routers. This approach involves the use of modems connected to the LAN server (bridge or router), to utilize the analog public telephone network. Circuit switching implies that the communications channel is not

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one of said at least one second local area network through said at least one wide area network;	dedicated 24 h per day, but must be brought on line when needed (via a process called call setup) and then taken down when no longer needed. Minoli, p. 263.
at least one bank of modems for connecting said at least one second local area network of said at least one intermediate subsystem to a corresponding some of said at least one first local area network of said one or more remote subsystems through said at least one wide area network;	Dial-up link between LAN routers. This approach involves the use of modems connected to the LAN server (bridge or router), to utilize the analog public telephone network. Circuit switching implies that the communications channel is not dedicated 24 h per day, but must be brought on line when needed (via a process called call setup) and then taken down when no longer needed. Minoli, p. 263.
at least one first wide area network router for connecting a corresponding one of said at least one second local area network of said at least one intermediate subsystem to said at least one wide area network; and	Minoli Fig. 9.7 (pg. 269) First router connecting two or more LANs over a WAN. The public switched telephone network 10 may be a frame relay network, a WAN. Campbell, et al., Col. 2, ln 61.
at least one second wide area network router for connecting a corresponding one of said at least one third local area network of said at least one central subsystem to said at least one wide area network.	Minoli Fig. 9.7 (pg. 269) Second router connecting two or more LANs over a WAN. The public switched telephone network 10 may be a frame relay network, a WAN. Campbell, et al., Col. 2, ln 61.
44. A system as in claim 43 wherein said at least one first wide area network and said at least one second wide area network comprises a carrier cloud which utilizes a frame relay method for transmitting the transaction data.	Campbell et al. in view of Minoli "Frame relay service provides interconnection among n sites by requiring only that each site be connected to the "network cloud" via an access line. ... The cloud consists of switching nodes interconnected by trunks used to carry traffic aggregated from many users (see Fig. 9.7). In a public frame relay network the switches and the trunks are put in place by a carrier for use by many corporations. Carrier networks based on frame relay provide communications at up to 1.544 Mbps (in the United States), shared bandwidth on demand, and multiple user sessions over a single access line. The throughput is much higher than that available for packet switching, making the service attractive for imaging applications. In a private frame relay network, the switches and trunks are put in place (typically) by the corporate communications department of the company in question." Minoli, p. 268 The public switched telephone network 10 may be a frame relay network, a WAN. Campbell, et al., Col. 2, ln 61.

'988 Patent	'550 to Campbell, et al.
45. A system as in claim 44 wherein said at least one second local area network and said at least one third local area network further comprises a corresponding one of at least one network switch for routing transaction data within said at least one second local area network and said at least one third local area network; and further wherein said data comprises (a) electronic transactions from credit cards, smart cards and debit cards, signature data or biometric data, or (b) paper transactions from documents and receipts.	"Frame relay service provides interconnection among n sites by requiring only that each site be connected to the "network cloud" via an access line. ... The cloud consists of switching nodes interconnected by trunks used to carry traffic aggregated from many users (see Fig. 9.7). In a public frame relay network the switches and the trunks are put in place by a carrier for use by many corporations. Carrier networks based on frame relay provide communications at up to 1.544 Mbps (in the United States), shared bandwidth on demand, and multiple user sessions over a single access line. The throughput is much higher than that available for packet switching, making the service attractive for imaging applications. In a private frame relay network, the switches and trunks are put in place (typically) by the corporate communications department of the company in question." Minoli, p. 268. The node 12 receives images of checks from a sending institution 14 transmitted through the network 10. The node 12 processes the check images and sends them to a receiving institution 16." Campbell, et al., Col. 2, ln 25-33.

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Please find below and/or attached an Office communication concerning this application or proceeding.

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THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS

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EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO 90/007829

PATENT NO. 5,910,988

ART UNI 3900

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified ex parte reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a replly has passed, no submission on behalf of the ex parte reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Order Granting / Denying Request For Ex Parte Reexamination	Control No. 90/007,829	Patent Under Reexamination 5910988	
	Examiner Michael O'Neill	Art Unit 3993	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The request for *ex parte* reexamination filed *25 November 2005* has been considered and a determination has been made. An identification of the claims, the references relied upon, and the rationale supporting the determination are attached.

Attachments: a)☐ PTO-892, b)☒ PTO-1449, c)☐ Other: _____

1. ☒ The request for *ex parte* reexamination is GRANTED.

RESPONSE TIMES ARE SET AS FOLLOWS:

For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's Reply (optional): TWO MONTHS from the **date of service** of any timely filed Patent Owner's Statement (37 CFR 1.535). **NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.** If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.

2. ☐ The request for *ex parte* reexamination is DENIED.

This decision is not appealable (35 U.S.C. 303(c)). Requester may seek review by petition to the Commissioner under 37 CFR 1.181 within ONE MONTH from the mailing date of this communication (37 CFR 1.515(c)). **EXTENSION OF TIME TO FILE SUCH A PETITION UNDER 37 CFR 1.181 ARE AVAILABLE ONLY BY PETITION TO SUSPEND OR WAIVE THE REGULATIONS UNDER 37 CFR 1.183.**

In due course, a refund under 37 CFR 1.26 (c) will be made to requester:

a) ☐ by Treasury check or,

b) ☐ by credit to Deposit Account No. _____, or

c) ☐ by credit to a credit card account, unless otherwise notified (35 U.S.C. 303(c)).

Michael O'Neill
CRU Examiner
Art Unit: 3993

cc:Requester (if third party requester)

DECISION

A substantial new question of patentability affecting claims 1-50 of United States Patent Number 5,910,988 is raised by the request for *ex parte* reexamination.

Service of Papers

After the filing of a request for reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parties where two or more third party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. See 37 CFR 1.550(f).

Waiver of Right to File Patent Owner Statement

In a reexamination proceeding, Patent Owner may waive the right under 37 C.F.R. 1.530 to file a Patent Owner Statement. The document needs to contain a statement that Patent Owner waives the right under 37 C.F.R. 1.530 to file a Patent Owner Statement and proof of service in the manner provided by 37 C.F.R. 1.248, if the request for reexamination was made by a third party requester, see 37 C.F.R 1.550(f). The Patent Owner may consider using the following statement in a document waiving the right to file a Patent Owner Statement:

WAIVER OF RIGHT TO FILE PATENT OWNER STATEMENT

Patent Owner waives the right under 37 C.F.R. 1.530 to file a Patent Owner Statement.

Extensions of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a

reexamination proceeding. Additionally, 35 U.S.C. 305 requires that *ex parte* reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

Amendment in Reexamination Proceedings

Patent owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c).

Submissions

In order to insure full consideration of any amendments, affidavits or declarations or other documents as evidence of patentability, such documents must be submitted in response to the first Office action on the merits (which does not result in a close of prosecution). Submissions after the second Office action on the merits, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116, after final rejection and by 37 CFR 41.33 after appeal, which will be strictly enforced.

Notification of Concurrent Proceedings

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a), to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 5,910,988 throughout the course of this reexamination proceeding. Likewise, if present, The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

Request's Indications

The request indicates that Requester considers:

Claims 46-50 are unpatentable over Campbell et al., USPN 5,373,550, (Campbell).

Claims 46-50 are unpatentable over Geer, USPN 5,930,778, (Geer).

Claims 42-45 are unpatentable over Campbell.

Claims 42-45 are unpatentable over the Minoli publication entitled "Imaging in Corporate Environments: Technology and Communication", (Minoli).

Claims 1 and 26 are unpatentable over Campbell.

Claims 2, 16, 18, 27 and 29 are unpatentable over Campbell.

Claims 3-8 and 28 are unpatentable over the combination of Campbell and admitted prior art, (APA).

Claims 9, 11-15, 19, 30-32 are unpatentable over the combination of Campbell, Owens, USPN 4,264,808, (Owens) ("old art" view in a new light) and Minoli.

Claims 17, 22-25 and 37 are unpatentable over the combination of Campbell and Minoli.

Claims 10 and 33 are unpatentable over the combination of Campbell, Owens and Minoli.

Claims 20 and 21 are unpatentable over the combination of Campbell and Minoli.

Claims 36 and 38-41 are unpatentable over Campbell.

Claims 1 and 26 are unpatentable over ANSI/ABS X9.46-1995, version 0.13 (ANSI-draft or ANSI-1995) and ANSI X9.46-1997, referred to (ANSI Standard or ANSI-1997).

Substantial New Question

There are substantial new questions of patentability (SNQP) is based on Campbell, Geer, Minoli, ANSI/ABS X9.46-1995, v. 0.13,and ANSI X9.46-1997. A discussion of the specifics now follows:

It is agreed that the consideration of Campbell raises an SNQP as to Claims 46-50 of the Ballard patent ('988 patent or Ballard). As pointed out in the request on pages 7-9, Campbell teaches as illustrated in figure 1 checks are scanned at a first bank, the check images are transmitted from the first bank to a check processing node (12), such as a clearinghouse, and images are further transmitted to a second bank. Campbell further teaches that image data may be transmitted between and among a remote, intermediate and central location, this can be considered a tiered or layered configuration. Moreover, Campbell teaches data extraction from the captured check images through character recognition capabilities at a sending location. Thus, there is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not these claims are patentable. Accordingly, Campbell raises an SNQP as to Claims 46-50, which has not been decided in a previous examination of the Ballard patent.

It is agreed that consideration of Geer raises an SNQP as to Claims 46-50 of the Ballard patent. As pointed out in the request on pages 9-10, Geer teaches a three tiered configuration with a first location (2) with electronic scanning means; the payee's depository bank (10); and the payment system (12), as shown in Figure 1. As taught in col. 5:25-31, "[i]nformation pertaining to checks and/or the cash letters in anticipation of a deposit in the payee's account corresponding to a cash letter (or cash letters) is transmitted from the payee to the collecting and

clearing depository bank." As taught in col. 9:1-10, "[t]his image of the check may also be transmitted electronically to the bank along with the other information extracted from the check." As taught in col. 9:27-30, "[t]he electronic check information ... is sent via an appropriate communication link (15) into the payment system (12)." Thus, there is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not these claims are patentable. Accordingly, Geer raises an SNQP as to Claims 46-50, which has not been decided in a previous examination of the Ballard patent.

It is agreed that the consideration of Campbell raises an SNQP as to Claims 42-45 of the Ballard patent. As pointed out in the request on pages 10-11, Campbell teaches the existence of three subsystems, one at each of the sending bank (14), the node (12) and the receiving bank (16), each having the existence of a transmitting means for transmitting images between the three subsystems in a tiered architecture, see e.g. Figure 1 with respect to the directional arrows of the communications lines (22,24,26,28) as well as Figure 2 directional arrows. Further pointed out in the request is that Campbell on col. 4:56-58 teaches that the check imaging equipment (18) and (32) maybe part of "large multiworkstation systems" which by design would be multiple components interconnected by a local area network (LAN). Thus, there is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not these claims are patentable. Accordingly, Campbell raises an SNQP as to Claims 42-45, which has not been decided in a previous examination of the Ballard patent.

It is agreed that the consideration of Minoli raises an SNQP as to Claims 42-45 of the Ballard patent. As pointed out in the request on pages 12-13, Minoli in Figure 2.6 shows hardware that may be used with wide area networks (WAN)s. Also, as pointed out in the

request, Minoli teaches that a typical remote image capture application in the banking industry "involves (1) scanning of documents at branch offices for transmission to a host computer at the main office of the central site." See Minoli, page 20. As shown in Figure 2.6, there is taught a three tier architecture configuration, one tier corresponding to the "Scan" segment, another corresponding to a "Utilities" segment, and a third corresponding to an "Access" segment. As shown in Figure 2.6, for the images in the "Scan" segment to be transmitted to the "Access" segment, they must be routed through the "Utilities" segment. Thus, Minoli teaches transmission of images from one LAN to another LAN, and then from that LAN to another LAN in a tiered or layered configuration. Thus, there is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not these claims are patentable. Accordingly, Minoli raises an SNQP as to Claims 42-45, which has not been decided in a previous examination of the Ballard patent.

It is agreed that the consideration of Campbell raises an SNQP as to Claims 1 and 26 of the Ballard patent. As pointed out in the request on pages 13-15, Campbell teaches a remote data access subsystem, the sending bank (14), see col. 3:10-12. In col. 5:23-28, Campbell teaches that a "controller (42) may read some data accompanying check images, for example, it may identify that TCP/IP protocol information accompanying those images. That information may instruct the node about the identity of the sending institution and the intended receiving institution." Thus, Campbell teaches images of document, such as checks, and subsystem identification information, i.e. accompanying identifiers, are transmitted from a remote data access subsystem. In col. 3:43-58, Campbell teaches a "processing node (12) receives check images and performs certain processing procedures on those images, including at least temporary

storage of the received check images." It is noted in col. 3:30-39 that the processing node (12) "transmits frames of digital information representing check images to the network (38) after those images have been processed by the node (12). A node controller and router (42) control the routing of check images to their intended destinations, both in the controller and to their ultimate destinations outside the network (38)." Thus, Campbell appears to teach a central data processing subsystem. Campbell in col. 2:20-22 and 50-63 appears to teach a communication network that send images: "The public switched telephone network (10) may be ... electrically or optically based or ... may be digital or analog. Two examples of suitable digital networks are a packet network and a frame relay network." Campbell also teaches a "controller (42) may also be configured to handle information encrypted by sending institutions to provide security for the images transported by the network (38). The controller (42) may have its own encryption and decryption equipment to provide a secure environment in the node (12)." Thus, it appears that Campbell teaches encrypting images and subsystem identification information for securing the information contained therein. Thus, there is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not these claims are patentable. Accordingly, Campbell raises an SNQP as to Claims 1 and 26, which has not been decided in a previous examination of the Ballard patent.

It is agreed that the consideration of Campbell raises an SNQP as to Claims 2, 16, 18, 27 and 29 of the Ballard patent. As pointed out in the request on pages 16-17, Campbell teaches scanner means in col. 2:64 - col. 3:12; a data collecting subsystem in Figure 2 and col. 2:46-49; a tagged, encrypted and compressed bitmap image in col. 7:15-27; and plural remote and central locations in col. 2:27-49. Also, Campbell teaches a first and second LANs and a WAN for

transmitting data between the systems taught within Campbell, see col. 3:10-31; col. 4:56-58 and col. 2:61 for the teaches of the LANs and WAN respectively. In Figure 2, Campbell teaches an intermediary between a remote and a central system; also, of note is col. 2:46-49 which teaches "[o]ne or both institutions (14) and (16) may also be any intermediary institution in the forward and reverse check clearance flows between a bank of first deposit and a payor bank." Thus, there is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not these claims are patentable. Accordingly, Campbell raises an SNQP as to Claims 2, 16, 18, 27 and 29, which has not been decided in a previous examination of the Ballard patent.

It is agreed that the consideration of the combination of Campbell and APA raises an SNQP as to Claims 3-8 and 28 of the Ballard patent. As pointed out in the request on pages 17-18, the Ballard patent in col. 6:46-60 teaches that "[a]s is known to persons of ordinary skill in the art, DAT 200 could also included additional devices for capturing other biometric data for additional security. These devices include facial scans, fingerprints, voice prints, iris scans, retina scans and hand geometry." Campbell teaches in col. 7:15-27 compressed tagged images; and, in col. 6: 57-60 digital storage. Furthermore, the Ballard patent teaches that DATAGLYPH is well known to those in the art, see col. 5:58 - col. 6:6. Thus, there is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not these claims are patentable. Accordingly, the Campbell and APA combination raise an SNQP as to Claims 3-8 and 28, which has not been decided in a previous examination of the Ballard patent.